

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of screening for small organic molecules that directly inhibit the interaction of glycosaminoglycans (GAGs) with GAG-binding viral proteins (GBVPs), the method comprising the steps of:

(a) either contacting a GAG with an GBVP in the presence of at least one candidate compound; or contacting a GAG with at least one candidate small organic compound, removing unbound organic compound and adding a GBVP; and

(b) measuring the amount of the GAG bound to the GBVP or the amount of the GBVP bound to the GAG, wherein a significant decrease in GAG-GBVP binding as compared to GAG-GBVP binding in the absence of the candidate compound, identifies said compound as inhibitor of the GAG-GBVP interaction.

Claim 2 (Canceled)

3. (Currently Amended) The method according to claim 1 ~~or~~ 2, wherein the GBVP is a fusion protein.

4. (Currently Amended) The method according to claim 1 ~~or~~ 2, wherein the GAG or the GBVP is tagged or labeled.

5. (Currently Amended) The method according to claim 1 ~~or~~ 2, wherein the GAG is heparan sulfate (HS-GAG) or heparin.

6. (Currently Amended) The method according to claim 1 ~~or~~ 2, wherein the small organic molecules are contacted with a proteoglycan containing GAG.

7. (Original) A method for the treatment or prevention of disorders related to virus attachment and entry or to bacterial or parasite attachment, comprising the step of administering to a subject in need thereof a therapeutically effective amount of a compound that directly inhibits the interaction of glycosaminoglycans (GAGs) with GAG-binding

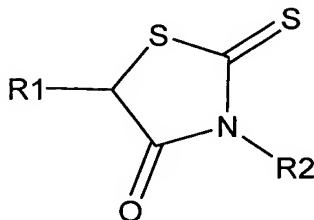
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viral proteins (GBVPs), thus preventing virus attachment and entry or bacterial or parasite attachment mediated by the GAG.

8. (Original) The method according to claim 7, wherein the disorder related to virus attachment and entry is an infection caused by a virus selected from the group consisting of a HIV, a HSV, CMV, HCV, RSV, an influenza virus, and rhinovirus.

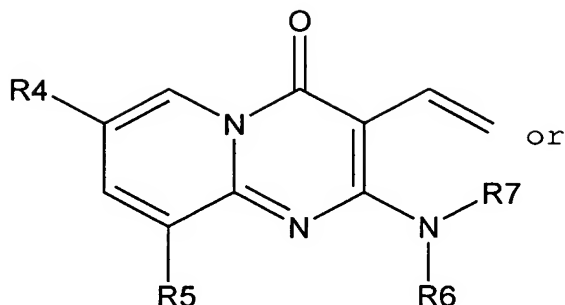
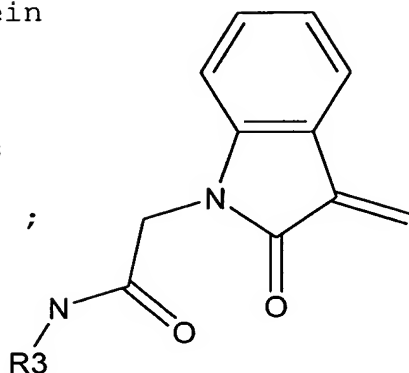
9. (Original) The method according to claim 8, wherein the disorder related to bacterial or parasite attachment is a bacterial infection or a parasite-induced disease such as malaria.

10. (Currently Amended) A pharmaceutical composition comprising a pharmaceutically acceptable diluent or carrier and an active ingredient of the general formula I:



wherein

R1 is



R2 is C<sub>1</sub>-C<sub>6</sub> alkyl unsubstituted or substituted by a radical selected from the group consisting of -SO<sub>3</sub>H, C<sub>1</sub>-C<sub>6</sub> alkoxy, phenyl, 4-(C<sub>1</sub>-C<sub>6</sub>)alkylphenyl, 4-(C<sub>1</sub>-C<sub>6</sub>)alkoxyphenyl, 2-furyl, tetrahydro-2-furyl, or 1,3-benzodioxinyl, or R<sub>2</sub> is cycloalkyl or C<sub>2</sub>-C<sub>6</sub> alkenyl;

R3 is phenyl substituted by at least one radical selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy(C<sub>1</sub>-C<sub>6</sub>)alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, cyano, halogen, trifluoromethyl, cycloalkyl, aralkyl, aryl, substituted aryl, and heterocyclyl;

R4 and R5 each is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl;

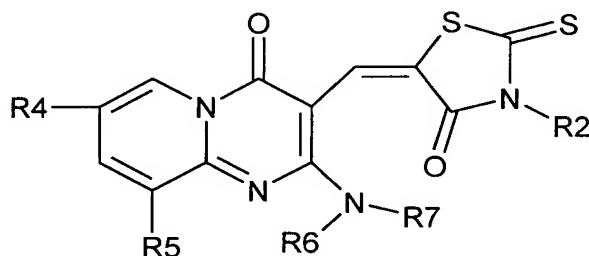
R6 and R7 each is selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkyl substituted by piperidinyl, 4-morpholinyl, piperazinyl, 4-(C<sub>1</sub>-C<sub>6</sub>)alkyl-piperazinyl, 4-arylpiperazinyl, 4-aralkylpiperazinyl, or imidazolyl; C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>6</sub>-C<sub>10</sub> aryl, ~~C<sub>7</sub>-C<sub>16</sub> aralkyl~~, and C<sub>7</sub>-C<sub>16</sub> aralkyl, or R<sub>3</sub> and R<sub>4</sub>

together with the nitrogen atom to which they are attached form a 5 to 7 membered saturated heterocyclic ring containing

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one or two heteroatoms, ~~and optionally~~ or such 5 to 7 membered saturated heterocyclic ring containing an additional nitrogen atom substituted at the additional nitrogen atom by C<sub>1</sub>-C<sub>6</sub> alkyl optionally or C<sub>1</sub>-C<sub>6</sub> alkyl substituted by a radical selected from the group consisting of halogen, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy and ~~or~~ phenyl, or by C<sub>2</sub>-C<sub>7</sub> alkoxycarbonyl, and pharmaceutically acceptable salts thereof.

11. (Currently Amended) The pharmaceutical composition according to claim 10 comprising a compound of the general formula Ia:



Ia

wherein:

R2 is C<sub>1</sub>-C<sub>6</sub> alkyl unsubstituted or substituted by a radical selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkoxy, phenyl, 4-(C<sub>1</sub>-C<sub>6</sub>)alkylphenyl, 4-(C<sub>1</sub>-C<sub>6</sub>)alkoxyphenyl, 2-furyl, tetrahydro-2-furyl and 1,3-benzodioxinyl, or R2 R<sub>5</sub> is cycloalkyl or alkenyl;

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R4 and R5 each is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl;

R6 and R7 each is selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkyl substituted by piperidinyl, 4-morpholinyl, piperazinyl, 4-(C<sub>1</sub>-C<sub>6</sub>)alkyl-piperazinyl, 4-arylpiperazinyl, 4-aralkylpiperazinyl, or imidazolyl; C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>6</sub>-C<sub>10</sub> aryl, ~~C<sub>7</sub>-C<sub>16</sub> aralkyl~~, and C<sub>7</sub>-C<sub>16</sub> aralkyl, or R<sub>3</sub> and R<sub>4</sub> together with the nitrogen atom to which they are attached form a 5 to 7 membered saturated heterocyclic ring containing one or two heteroatoms, ~~and optionally~~ or such 5 to 7 membered saturated heterocyclic ring containing an additional nitrogen atom substituted at the additional nitrogen atom by C<sub>1</sub>-C<sub>6</sub> alkyl ~~optionally~~ or C<sub>1</sub>-C<sub>6</sub> alkyl substituted by a radical selected from the group consisting of halogen, hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy and ~~or~~ phenyl, or by or C<sub>2</sub>-C<sub>7</sub> alkoxycarbonyl, and pharmaceutically acceptable salts thereof.

12. (Original) The pharmaceutical composition according to claim 11, wherein the compound of formula Ia is selected from the group consisting of:  
4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[[3-[(2-methylpropyl)methyl]] -4-oxo-2-thioxo-5-

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thiazolidinylidene)methyl]-2-[4-(2-hydroxyethyl)-1-piperazinyl]- (Compound 1)

4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[[3-(phenylethyl)-4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-[[2-(4-morpholinyl)ethyl]amino]-9-methyl- (Compound 2)

4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[(3-pentyl -4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-(4-methyl-1-piperazinyl)- (Compound 3)

4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[[3-(phenylethyl)- ]-4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-(4-methyl-1-piperazinyl)- (Compound 4)

4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[(3-phenylmethyl-4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-(4-methyl-1-piperazinyl)- 7-methyl- (Compound 5)

4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[[3-[(4-methoxyphenyl)methyl] -4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-(4-methyl-1-piperazinyl)- (Compound 6)

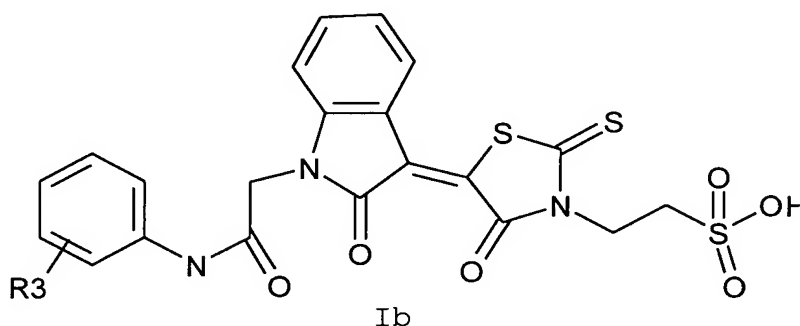
4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[(3-butyl-4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-9-methyl-2-(4-methyl-1-piperazinyl)- (Compound 10)

4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[(3-phenylmethyl-4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-[[3-(1H-imidazol-1-yl)propyl]amino]- (Compound 25)

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4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[[3-(phenylmethyl)-4-oxo-2-thioxo-5-thiazolidinylidene]methyl]-2-[[2-(4-morpholinyl)ethyl]amino]-9-methyl-(Compound **26**).

13. (Original) The pharmaceutical composition according to claim 10, comprising a compound of the general formula Ib:



wherein:

R3 is C<sub>1</sub>-C<sub>10</sub> alkyl, hydroxy(C<sub>1</sub>-C<sub>10</sub>)alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, cyano, halogen, trifluoromethyl, cycloalkyl, aralkyl, aryl, substituted aryl, and heterocyclyl; and pharmaceutically acceptable salts thereof.

14. (Original) The pharmaceutical composition according to claim 13, wherein R3 is methyl, ethyl,



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hydroxyethyl, halogen, cyano, 3,4-dicyano, methoxy, 4,5-dimethoxy, or 3-trifluoromethyl.

15. (Original) The pharmaceutical composition according to claim 13, wherein the compound of formula Ib is: 5-[1,2-dihydro-2-oxo-1-[2-oxo-2-[[3-(trifluoromethyl)phenyl]amino]ethyl]-3H-indol-3-ylidene]-4-oxo-2-thioxo-3-thiazolidineethanesulfonic acid [**Compound 11**]; or 5-[1,2-dihydro-2-oxo-1-[2-oxo-2-[3-(cyanophenyl)amino] ethyl]-3H-indol-3-ylidene]-4-oxo-2-thioxo-3-thiazolidine ethanesulfonic acid.

16. (Currently Amended) The pharmaceutical composition according to ~~any one of claims 10 to 15~~ claim 10, for treatment or prevention of viral diseases, disorders or conditions mediated by virus-to-cell attachment via heparan sulfate glycosaminoglycans (HS-GAGs).

17. (Original) The pharmaceutical composition according to claim 16, wherein the viral disease is an infection caused by a virus selected from the group consisting

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of a HIV, a HSV, CMV, HCV, RSV, an influenza virus, and rhinovirus.

18. (Currently Amended) The pharmaceutical composition according to ~~any one of claims 10 to 15~~ claim 10, for treatment or prevention of disorders mediated by bacteria-to-cell or parasite-to-cell attachment via ~~heparan-sulfate glycosaminoglycans~~ (HS-GAGs).

Claims 19-21 (Canceled)

22. (Currently Amended) A method for the treatment or prevention of viral diseases, disorders or conditions mediated by virus-to-cell attachment via ~~heparan-sulfate glycosaminoglycans~~ (HS-GAGs), comprising the step of administering to a subject in need thereof a therapeutically effective amount of a pharmaceutical composition comprising a compound of the general formula I in claim 10.

23. (Original) The method according claim 22, wherein the viral disease is selected from a group consisting

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of HIV, HSV, CMV, HCV, RSV, influenza virus, and rhinovirus infection.